# Pseudo Noun Incorporation in Tagalog: Prosody and Structure\*

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#### 1 Nutshell

Correlation between phasal structure and prosodic structure.

- Prosodic evidence for reduced structure in Tagalog pseudo noun incorporation (PNI).
- Following Starr (2015): Tagalog PNI similar to Niuean, Massam (2001).
- We depart from Starr, however, in that we have also observed instances of PNI that include adjectives.



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- Furthermore, we have adopted Richards' (2017) analysis for the prosody of Tagalog declaratives.
- We show that instances of PNI do not involve pitch reset, whereas full DPs typically
  do involve pitch reset.
- Proposal: Nominals that have undergone PNI have a reduced structure, despite the presence of Case.
- Specifically, we propose that PNI nominals lack a DP and NumP.
- Semantically, the lack of NumP gives rise to the general number reading discussed by Starr.
- Phase structure correlates with prosodic structure (Kahnemuyipour, 2009; Kratzer and Selkirk, 2007; Selkirk, 2009, 2011).
- Specifically for the Tagalog data, we propose that the lack of the DP/KP phase correlates with the lack of pitch reset.
- The conclusions here impinge on Match Theory in general (Selkirk, 2011): prosodic properties of PNI in Tagalog are isomorphic with syntactic structure.
- Specifically, we pursue the idea that prosodic domains are isomorphic with phases (Newell and Tobias, 2017).
- $\phi$  phrase = KP/DP phase
- $\phi$  word = nP phase
- Also agree with Starr: PNI, even within Austronesian, is not a unitary phenomenon.

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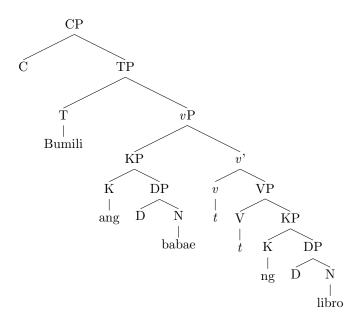
## 2 Background

- Tagalog: Austronesian 30 70 million speakers in and around Manila.
- actor voice: ang-DP is agent ("ang" or "si" on proper nouns)
- ng-DP is patient ("ng" or "ni" on proper nouns)
- ang sometimes referred to as nominative and ng as genitive Kroeger (1993).
- Syntactic Noun Incorporation: (Baker, 1988) morphological fusion between N and V.
- Semantic Noun Incorporation: (Dayal, 2011; Farkas and de Swart, 2003) semantic properties of syntactic NI hold, but no morphological fusion, N/NP is still free
- Pseudo Noun Incorporation: (Massam, 2001) intermediate: no morphological fusion as in Mohawk, but VO adjacency is attested.
- Semantic properties:
  - Number neutrality
  - Obligatory low scope
  - No or little discourse reference, but see LeSourd (2014)
  - Idiomatic or institutionalized readings (Mithun, 1984)
- Starr (2015): construction similar to PNI in Niuean is found in Tagalog.
- ng-marked objects can receive a general number reading, while ang-marked objects cannot.
- Starr: ng-marked object with adjective resists general number (contra our findings below).
- (1) Bumili ng libro ang babae.

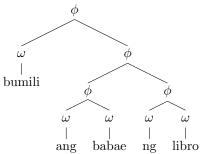
  NOM.bought NG book ANG woman
  'The woman bought a book/some books.'
- (2) Bumili ng pula-ng libro ang babae.

  NOM.bought NG red-LNK book ANG woman

  'The woman bought a red book/some red books.'
- (3) Binili ang libro ng babae
  ACC.bought ANG book NG woman
  'The woman bought a book/\*some books.'
  - Tagalog prosody (Richards, 2017), based on Elfner (2015)
  - syntactic tree converted to prosodic tree by pruning empty nodes



presumed structure:



- every non-minimal  $\phi$ : L\* H at left edge
- every  $\phi$ : H L\* or L\* at right edge
- verb and 1st HP: rise at left edge
- both KPs: fall at right edge

## 3 Methodology

- Seven native speakers from Tagalog from Manila, living in Seoul, were asked to read a list of 36 sentences (12 test sentences plus 24 fillers, randomly ordered), one was excluded for failing to understand the testing procedure.
- The data were recorded using Praat on a desktop PC in a sound-proof room.
- Variables:
  - Case (ang/ng)
  - adjacency to verb
  - modification by adjective
- Test sentences:

- (4) a. Bumili ang babae ng mansanas. [V NGDP S] NOM.bought ANG woman NG apple 'The woman bought the/an apple.'
  - b. Bumili ng mansanas ang babae. [V S NGDP] NOM.bought NG apple ANG woman 'The woman bought the/an apple.'
  - c. Binili ng babae ang mansanas. [V S ANGDP]
    ACC.bought NG woman ANG apple
    'The woman bought the/an apple.'
  - d. Binili ang mansanas ng babae. [V ANGDP S] ACC.bought ANG apple NG woman 'The woman bought the/an apple.'
  - e. Bumili ang babae ng pulang mansanas. [V S NGAdjNP] NOM.bought ANG woman NG red apple 'The woman bought the/a red apple.'
  - f. Bumili ng pulang mansanas ang babae. [V NGAdjNP S] NOM.bought NG red apple ANG woman 'The woman bought the/a red apple.'
  - After the sentences were recorded we asked a follow-up question to test for general number.
  - For each test sentence, we showed a picture of someone buying a single apple or red apple and a picture of someone buying several apples or red apples.



- follow-up experiment (underway):
- test ng-nominal and ang-nominal for scope under negation and modoals

### 4 Results

#### 4.1 General Number

• We found that a general number reading was available for ng-marked objects regardless of the presence of an adjective, with some speaker variation as mentioned above.

	1	1	1 1	1 1
	apple SING	apple PL	book sing	book PL
V ngDP S	6	4	6	5
V S NGDP	6	6	6	6
V ANGDP S	6	1	6	0
V S ANGDP	6	1	6	0
V ngAdjNP S	6	2	6	2
V S ngAdjNP	6	4	6	3

- ang-marked DP uniformly rejects plural reading does not exhibit number neutrality.
- ng-marked DP with no adjective easily allows number neutrality, slight preference for VSO order although this may likely not be significant with a larger study.
- ng-marked DP modified by an adjective displays mixed results much speaker variation

#### 4.2 Scope

- scope facts (very preliminary, only tested with one speaker):
- (5) Scope under Negation
  - a. Hindi k-um-ain si Juan ng mansanas dahil wala nito. NEG eat1-AV-eat2 ANG Juan NG apple because nothing this 'Juan didn't eat an apple because there aren't any.'
  - b. ...Sige. Ako na lang ang kakain nito.'Ok. I'll eat it then.' (also possible with above)
  - c. \*Hindi k-in-ain ni Juan ang mansanas dahil wala nito NEG eat1-AV-eat2 NG Juan ANG apple because nothing this 'Juan didn't eat the apple because it doesn't exist.'
  - d. ...Sige. Ako na lang ang kakain nito.
    'Ok. I'll eat it then.' (possible with above)
  - ng-marked DP can take high or low scope. unexpected
  - $\bullet$  ang-marked DP can only scope above negation. expected
- (6) Scope under Modal dapat 'should'
  - a. Dapat k-um-ain si Juan ng mansanas. NEG eat1-AV-eat2 ANG Juan NG apple 'Juan needs to eat an apple.' (speaker: any apple)
  - b. Dapat kain-in ni Juan ang mansanas.
     NEG eat-OV NG Juan ANG apple
     'Juan needs to eat an apple.' (speaker: a specific apple)
  - $\bullet\,$  ng-marked DP scopes under modal. expected
  - ang-marked DP scopes above modal. expected
- (7) Scope under Adverbs: madalas 'often'
  - a. Madalas si Juan mag-basa ng aklat. often ANG Juan MAG-read NG book 'Juan often reads a book.' (speaker: any book/#a specific book)

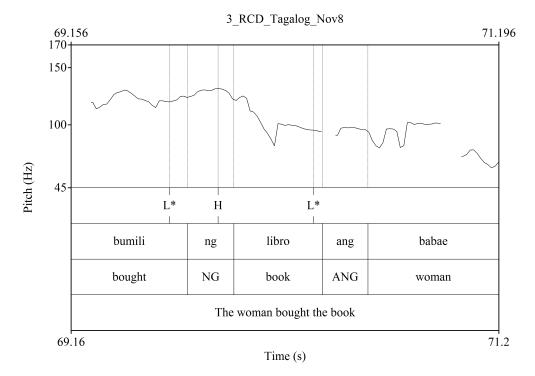
- Madalas basa-hin ni Juan ang aklat.
   often read-OV NG Juan ANG book
   'Juan often reads the/a book.' (speaker: a specific book only)
- $\bullet$  ng-marked DP scopes under adverb. expected
- $\bullet\,$   $ang\textsubsection$  and an amplitude of the second and the seco

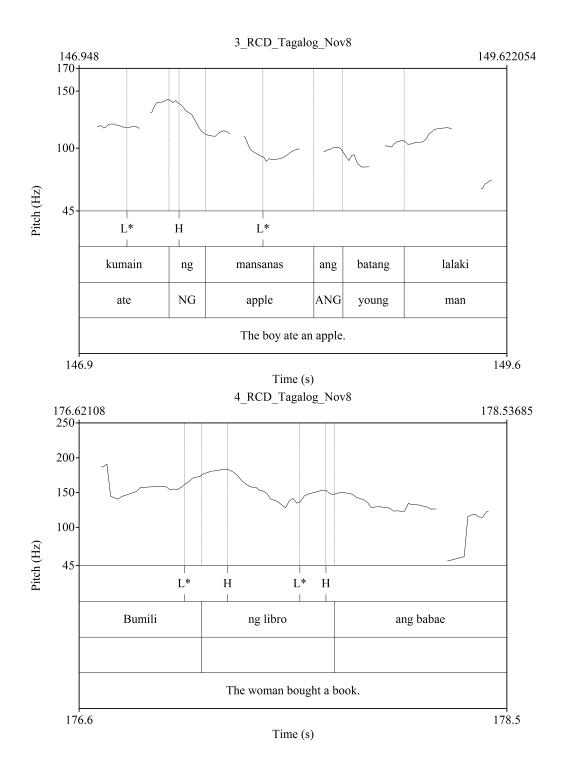
## 4.3 Interim Summary

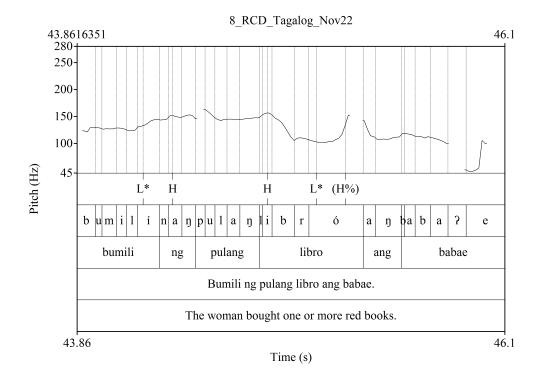
- General Number
  - broadly aligns with Starr
  - ng-NP can have general number
  - ng-Adj-N can have general number for some speakers
  - ang-NP cannot have general number
- Scope
  - ng-NP obligatorily scopes low (optionally high with negation, though)
  - ang-NP obligatorily scopes high

## 4.4 Prosody

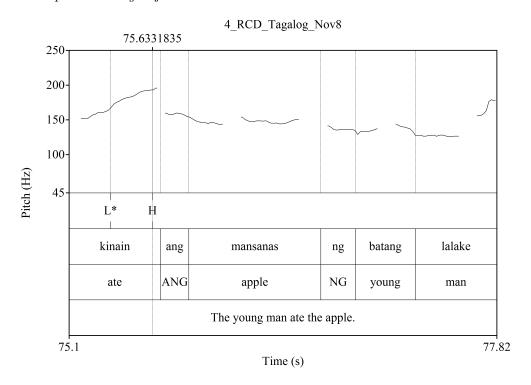
- Richards reports that the first nominal after the verb has a L\* H pitch accent (and often pitch reset).
- Consider the following pitch tracks

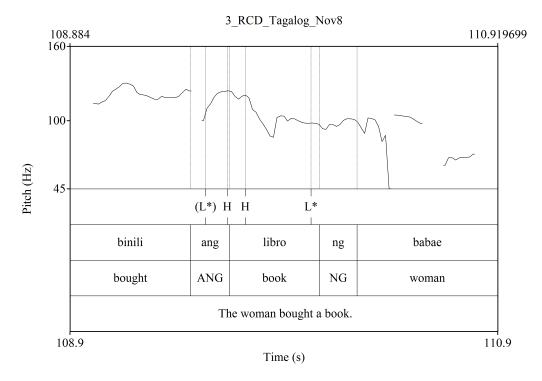






ullet compare with ang-object





- ng-nominal no pitch reset
- ang-nominal pitch reset
- initial rise on first DP not observed here, although these DPs are shorter than the ones Richards tested.

### 5 Discussion

- We adopt the general discussion of Starr and Richards for PNI and prosody in Tagalog, with the small differences noted above.
- Proposal: PNI nominals in Tagalog are structurally deficient and project only as far as nP.
- As an nP, the nominal is still phrasal, and has the same prosodic properties of a phrase as discussed by Richards.
- still has L\* H pitch accent.
- lack of NumP = number neutrality
- $\bullet$  lack of DP = low scope phenomena
- Since the KP/DP phase is absent, however, we propose that this correlates with the lack of pitch reset at the beginning of the nominal.
- KP/DP phase =  $\phi$  phrase, diagnosed by pitch reset and initial L\* H pitch accent
- nP phase =  $\phi$  word, diagnosed by final L\* or H L\* pitch accent
- We conclude that phasal structure plays a role in determining the intonational contours of Tagalog PNI and non-PNI constructions.
- PNI in Tagalog = a kind of semantic incorporation due to reduced structure, diagnosed by prosodic factors (namely, lack of pitch reset and lack of phrase-initial rises)

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